

300VA, Industrial Quality AC-AC Frequency Converter with PFC Universal AC input and Sine Wave Output FCP 300-FX Series



- Sinusoidal output voltage
- PFC input with universal range
- Rugged, industrial quality
- Filtered input
- Conduction/convection cooled
- Full electronic protection
- Field-proven design topology

This rugged AC-AC frequency converter with universal PFC input utilizes field proven, microprocessor-controlled technology to generate the required output power with pure sine wave output voltage. The AC-DC input stage boosts the input voltage to a higher DC bus voltage, which feeds the DC-AC inverter to generate the required AC output. The high frequency conversion enables compact construction, low weight, and high efficiency. The input and output are filtered for low noise. Cooling is by conduction via baseplate. Additional cooling is achieved by natural convection through the cooling slots. All heat generating components are installed on aluminum heatsink blocks which are thermally connected to the base plate. This also provides exceptional mechanical ruggedness. Conformal coating provides protection against humidity and airborne contaminants. Full electronic protection, low component count, large design headroom and the exclusive use of components with established reliability contribute to a high MTBF. The unit is manufactured at our plant under strict quality control.

SPECIFICATIONS

Input Voltage

95-264Vac (Universal) 47... 63Hz
400Hz on request

Input Current: 4Arms max.

Power Factor is better than 0.97 at full load for the entire input range.

Meets EN61000-3-2

Input Protection

Inrush current limiting

Varistors

Internal safety fuse

Lower voltage than the specified minimum input will not damage the unit

Isolation

2250Vdc input to chassis

4300Vdc input to output

8mm spacing

2250Vdc output to chassis

Floating output

Standards

Designed to meet

C22.2 No. 107.1 - 01,

UL 458 and EN62368-1

EMI

EN55032 Class A with margins

Class B EMI as option

Switching Frequency

80kHz \pm 5kHz PFC input section

Hold Up Time

Min. 10ms at any input for 5% drop in the output voltage

Output Voltage

115Vac/2.6A rms @ 60Hz or 400Hz

300VA continuous or

230Vac/1.3A rms @ 50Hz

300VA continuous.

Output is floating, either terminal

can be grounded

Other outputs are available on request.

Output Wave Form

Sinusoidal

Total Harmonic Distortion

Less than 5% at full load

Line/Load Regulation

\pm 2% from no load to full load

Load Crest Factor

2 at 90% load

Output Noise

High frequency ripple is less than 500mVrms (20MHz BW)

Output Overload Protection

Current limiting with short circuit protection

Thermal shutdown with automatic recovery in case of insufficient cooling

Output Overvoltage Protection

140Vac (for 115Vac output) or 280Vac (for 230Vac output) by internal supply voltage limiting

Efficiency

Typically 80% at full load

Operating Temperature Range

0°C to +50°C for full specification

Extended temperature ranges available

Temperature Drift

0.05% per °C over operating temperature range

Cooling

Conduction to customer heat-sink or chassis and natural convection

Environmental Protection

Basic ruggedizing

Conformal coating

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 - 95% non-condensing

MTBF

120,000 hours at 45°C

Demonstrated MTBF is significantly higher

Indicators

None

Control Input

None

Alarm Output

None

Option: output fail alarm (Form C)

Package/Dimensions (W x H x L)

FX: 132 x 62 x 290 mm

5.2" x 2.43" x 11.4"

Includes baseplate, excludes terminals

Mounting holes are clear.

Weight

2.2 kg (4.9 lbs)

Connections

12 pole barrier type terminal block with 3/8" spacing

RoHS Compliance

Compliant

Warranty

Two years subject to application within good engineering practice

Terminal Block Pin-out

INPUT				OUTPUT							
PH	N	GND	NOT USED	NOT USED	NOT USED	NOT USED	GND	NOT USED	N	PH	NOT USED
~	~	⊥					⊥		~	~	
1	2	3	4	5	6	7	8	9	10	11	12

ABSOPULSE power supplies are designed and built to customer requirements. The specifications on this data sheet are generic guidelines only and are subject to change

OEM of industrial and railway quality DC-DC converters, AC-DC power supplies and battery chargers, DC-AC sine-wave inverters, phase and frequency converters, DC-output UPS systems and complete power systems in 19" and 23" racks since 1982. Custom or standard. ABSOPULSE is a BABT-approved Facility.



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